THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

$2.00 PER YEAR. ESTABLISHED 1878. 10c. SINGLE COPY.

VOL. XVIII. CLEVELAND, OHIO, APRIL 25, 1895. NO. 17

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and im rove the character of the service rendered to the public.

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A NATIONAL RULING.

Secretary Gresham has laid down some doctrine touching the rights of merchant steamers in foreign ports to afford asylum to refugees that may be of great importance to masters of vessels. This was called out by a letter addressed to the state department in December 1893, by C. P. Huntington, president of the Pacific Mail Steamship Co., asking for an exact definition of the powers of captains of merchant steamers in this respect.

The secretary responded that the so-called doctrine of right of asylum has no application to merchant vessels in port. It follows that a shipmaster can find no exercise of discretion on the character of offense charged against the refugee. While no general rule can be laid down as a comprehensive principle, a merchant vessel in a foreign port is within the local jurisdiction of the country with respect to the offenses or offenders against the laws thereof and an orderly demand for the surrender of a person accused of crime by due process of law, with the exhibition of a warrant of arrest in the hands of the regular accredited officers of the law, may not be disregarded or resisted by the master of the ship. Arbitrary attempts to capture a passenger by force may call for a disavowal when the resort to violence endangers the lives of innocent persons and the property of a friendly nation. Whether, if force be threatened, the master of the vessel is justified in putting in jeopardy, by his resistance, the interests conferred to his care, must be largely a question for his decision.

That the passengers may have come on board at the port where the demand is made or at another port of the same country is immaterial to the right of local jurisdiction.

Secretary Gresham concludes with an admonition to American merchant captains to permit the orderly operation of the law in foreign ports on their ships and thus avoid application for asylum of refugees and the occasions for the exhibition of arbitrary force against their ships. This ruling applies to merchant vessels without vitiating the action of men-of-war in the premises.

AIDS TO NAVIGATION.

The light-house tender Haze has just completed marking the new straight channel in Sandusky Bay and has also placed two extra buoys on the outer bar. The marks formerly in the old channel have been entirely discontinued. There has been placed several buoys along the dock front defining the channel width. In Maumee a buoy has been placed abreast of the center of the pilework showing the width of the channel at that bend. All aids to navigation are now in position from Detroit to Cleveland and the lower portion of the district as far east as Ogdensburg will be marked and buoyed as soon as the ice will permit.

STEAMBOAT EQUIPMENT INSPECTION.

Supervising Inspector-General J. A. Dumont has returned to Washington his headquarters from a trip to Buffalo, Detroit, Cleveland, and Pittsburg. At the lake cities Gen. Dumont talked with the supervising inspectors and many vesselmen in regard to the enforcement of the law, enacted last February, providing new "rules of the road," and found that no complaints have been made. It is hoped that the new regulations will be enforced without serious difficulty. A number of one-masted vessels have already added second masts in order to comply with the law in regard to range lights. Inspector-General Dumont has some doubts as to whether the new rules relating to passing fog signals will prove practical, but experience will soon demonstrate whether his misgivings are well founded. In regard to the complaints recently made to the Secretary of the Treasury that many passenger vessels on the lakes are not equipped with a sufficient number of life-boats, Gen. Dumont said: "The law gives the Supervising Inspection Department the authority to determine how many life-boats shall be carried. It may seem hard to say so, but the fact is that it would be impossible for a vessel to carry enough life-boats to accommodate all passengers in case of accident. The boats would take up so much room that the passengers could never come on deck, and the crew could not manage the vessel. People who go to sea must take some risks. We require that every vessel shall carry a life preserver for each passenger, and a reasonable number of lifeboats. The inspectors report regularly as to the life saving equipment of all vessels, and if any vessels are not complying with our regulations I do not know what ones they are. Complaints will be carefully investigated."

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

GRAND HAVEN PIERHERD RANGE (FRONT) LIGHT.—Notice is hereby given that, on or about May 4, 1895, the fixed red lantern light, exhibited from the end of the elevated conduit, near the outer end of the S. pier, harbor of Grand Haven, will be discontinued.

GRAND HAVEN PIERHEAD RANGE (REAR) LIGHT.—On the same date the structure from which this light is exhibited will be moved 511 feet along the S. pier, to a point about 75 feet from the outer end, and the light re-established therein without any other change.

Thereafter the name of the light will be Grand Haven Pierhead Light.

By order of the Light-House Board.

JOHN G. WALKER,
Rear-Admiral, U. S. Navy, Chairman.

OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, D. C., April 22, 1895.

LIGHT-HOUSE SUPPLY CONTRACTS.

The Light-House Board has awarded this week the following contracts for supplies of the Eleventh Light-House District for the fiscal year ending June 30, 1896: Fuel, Timothy Hurley, Detroit; bituminous coal, delivered at stations, $8.30 per ton; for tenders, $5.60 per ton; Massillon coal for tenders, $2.74 per ton. Supplies, paints, oils, etc., Acme White Lead and Color Co., Detroit, $709; hardware, tools, hose, etc., Mineral State Rubber Co., New York, $97; window glass, Bradford & Co., Syracuse, N. Y., $9.35; stone sinkers for buoys, Henry Lemmer, Detroit, $3.85 each, for delivery at Detroit. Shackles for buoys, Rivard & Tristam, Detroit, .04 per pound. Buoy service, Saginaw River, E. A. Gustin, West Bay City, $99; St. Mary's River and Hay Lake channel, David Tate, Sault Ste. Marie, $1,400.

The Light-House Board also awarded a contract for the construction of two beacons for Grassy Island (Ecorse), Mich., range light, and the foundation for the same to A. J. Servis & Son, of Youngstown, N. Y., at their bid of $2.494.

NEW LAKE TONNAGE.

Official numbers have been granted by the Bureau of Navigation, Treasury Department, to the following lake built vessels: Schooners Malta and Marcia 2,237 gross and 2,132 net tons; Cleveland, built by the Chicago Ship Building Co., steamer John B. Trevor, 1,713 gross and 1,318 net tons; Buffalo, built by the American Steam Barge Co., West Superior, Wis.

NEWS AROUND THE LAKES.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

Grain freights to Buffalo continue at one cent per bushel.

There is a fair demand for lumber carrying vessels both steam and sail.

C. I. Beers formerly agent of the Anchor line boats at this port died here on Saturday last.

Wiley M. Egan chartered the schooner Golden Age for 150,000 bushels of oats at through rates.

Palmer Cook & Calbick chartered the steamer Fred Pabst for 93,000 bushels of corn for Buffalo at one cent.

Capt. James Hogan has been appointed local inspector of hulls. He was last season in charge of the steambarge Albert Oper.

J. J. Rardon & Co., chartered the steamer Arizona for corn to Kingston at 2¾ cents, and the barge Ashland for corn to Buffalo at one cent.

Local Inspectors Chas. Richardson and Stewart Moore, have inspected the hulls and boilers of nearly 100 steamers since the beginning of this year.

The steamer Fred Pabst, Capt. Dan Sullivan, arrived here, light, from Milwaukee, Saturday. She loaded 93,000 bushels of corn and left for Buffalo Tuesday afternoon.

The whaleback steamer Christopher Columbus, and the Holland and Chicago, and Saugatuck passenger and freight steamers will land at the L. M. & L. S. Co.'s Rush Street dock during the season.

The Light House Board has awarded to George Harrington, of this port, the contract to build a light ship for Boston Harbor at a cost of $64,000. The next lowest bid was from a Boston firm at $77,000.

The Chicago, St. Joseph and Benton Harbor Co.'s steamer will arrive on Thursday from Manistee. She will make tri-weekly trips for the present between Chicago St. Joseph and Benton Harbor. Her passenger dock will be at the south side of Clark Street Bridge and her freight dock at the end of Northern Michigan Co.'s dock at the end of North Michigan street. Capt. Peter McGruggan is in charge.

The Goodrich Transportation Co.'s fleet of fine steamers have been put in splendid condition for their seasons work. Their steamer Indiana will make the first trip of this season to Green Bay this week. The steamer Chicago will arrive here this week, and the City of Racine next week. All of their steamers will soon be running on their usual routes.

A sad accident occurred on Friday morning last at the Chicago Shipbuilding Company's ship yard at South Chicago, whereby three workmen were killed and and six others injured by the falling of a derrick on to the deck of the Arcadia which the company is building for John Corrigan of Cleveland. The cause of the accident was the breaking of a steel guy rope which had been spliced.

The Light-House Inspector of the Ninth District asks for proposals for furnishing anthracite and bituminous coal and wood for all light-ships and stations within his district for the fiscal year ending June 30, 1896. Commander J. H. Dayton, U. S. N., is the Inspector for this district and is stationed at Chicago. I send in this note as there are about thirty stations to supply, and perhaps due publicity has not been given to the department's requirements so that the bids may not be as competitive as they would have been otherwise.

The Lake Michigan and Lake Superior Company's steamer City of Traverse will be their pioneer boat this season, she will leave Chicago for Lake Superior next Saturday. The steamer J. L. Hurd will leave here Saturday evening and the Peerless next Tuesday. It is now expected that their steamer Manitou will commence to run on June 22. The company have leased the Globe dock near the mouth of the Chicago River, and they are building freight sheds upon it. The dock will be used for incoming freight only.

At Miller Brothers the schooner Cape Horn is in dock to have a leak stopped, tug Tom Brown to have her stern bearings fixed and leaks stopped, the steamer Uncle Charley for repairs, the steamer W. J. Carter for a new shoe, the sloop-yacht Hattie B. for cleaning and painting bottom, the steamer Alleghany was in and had a leak stopped, the tug J. G. Van Schaick had her stern bearing fixed, the steamer New York received new holding down bolts, the tug G. P. Ferry a new stem and some new plank on her side.

DULUTH AND SUPERIOR.

Special Correspondence to The Marine Record.

Capt. McDougall says the whaleback fleet will carry about a million tons of ore this season.

From Duluth to Detroit, Cleveland, Erie and Buffalo the flour rate will be 12½ cents a hundred, the same as the opening rate of last year.

Capt. W. H. Singer has gone to Benton Harbor for his new tug Zenith, which he expects to bring here about May 1, if the ice at the "Soo" will permit.

Napoleon Grignon has been building a steam launch for the government which will be a little larger than the old Tangent and will be furnished with that boat's machinery and name.

A detailed estimate of the coal in dock at the head of the lakes, puts it at 375,000 tons, or 25,000 tons less than the estimate two months ago of the amount that would be in dock when navigation opened.

Robert A. Parke, of Richmond, N. Y., has purchased lots 5, 6, 7 and 8 in block 13, Bay Front division, to be improved at once for dockage purposes. The property is between Ninth and Tenth avenues W.

The American Steel Barge Co. expects to build two whaleback vessels this summer, both for parties outside the company. Capt. McDougall says there is nothing definite yet, but it is probable the boats will be built.

A buoy patrol will be maintained in Duluth harbor during the coming season, keeping in place the sixty-six buoys used to mark the channels in upper and lower St. Louis Bay. The location of each buoy will be ascertained by triangulation every day.

In relation to the new rule requiring tugs, as well as other vessels, to report for each trip in and out of the harbor, Maj. Sears says that he does not intend to enforce any rule which will be a hardship on the tug-owners, and that after the plan has been tried there will probably be some features which can be modified.

Holden & Osborne, who have the government contract for driving 7,000 piles on the dyke at Grand Marais, Mich., harbor, are getting together their outfit and will transport it on a barge by tug so as to begin work June 1. The piles will be sunk with a pump, night and day crews employed, and the work rushed so as to finish the contract by the close of the season.

The Peyton, Kimball & Barber Lumber Co. will resist the action of the West Superior council in condemning the end of Connor's Point to cut off several hundred feet in the interests of navigation The property consists of a large lumber dock, now nearly completed, across the point. The company threatens to remove its saw mill and yards to Duluth if the city succeeds in depriving it of this land.

DETROIT, MICH.

Special Correspondence to The Marine Record.

The schooner Nelson takes 45,000 bushels of wheat to Buffalo at 1½ cents.

The E. M. Peck and Fayette Brown will probably tow whaleback barges this summer.

The steamer J. H Pauley has been so extensively repaired during the winter that her insurance rating has been raised.

Gen O. M. Poe does not expect that the corrected charts of St. Mary's River or the general chart of Lake Superior on one sheet will be issued for some months yet.

The little Canadian canaller Sligo, which laid up at Sandwich last winter, has been given a good overhauling. It is said that she cleared $1,800 for her owners last season.

Annibale Blanchi, of this port has been awarded a contract by the light-house board for provisions for the eleventh district for the fiscal year ending June 30, 1896, at his bid of $60,03 per man per annum on vessels and $31,71 at stations.

The Detroit, Belle Isle & Windsor Ferry Co, are making improvements on every hand for the accommodation and comfort of their vast and increasing patronage. The seven boats belonging to the company are being put in the dry dock in turn for a complete overhauling.

A contract has been signed between the C. & B. Line and the Detroit Dry Dock Co. for a large steel side-wheel passenger steamer to be completed next spring at a cost of $375,000. A compound walking-beam engine, six cylindrical boilers and feathering paddle wheels are to make her the speediest boat on the lakes.

The new boat being built by Anderson, of Marine City, for Capt. J. M. Jones, is well along toward completion. The engines of the steamer George L. Colwell will be put into her. Jesse H. Farwell, Margaret Smith and E. C. Smith have sold the hull of the Colwell to Jesse A. Van Slyke, of this city for $4,000, and her new owner will convert her into a tow barge.

The big wrecking tug Favorite has taken up her regular station at Cheboygan for the season. During the winter the Favorite has been equipped with a complete electric light plant and received new arches, also topsides strengthened and been given more cargo handling facilities. Capt. Mart. Swain the well-known wrecking master is in charge.

Alger, Smith & Co. will raft about 50,000,000 feet of logs to Detroit and Ecorse from Black River, and will also send 20,000,000 feet from Georgian Bay to Cheboygan to be manufactured there. Brownlee & Co. will raft 3,000,000 feet from Georgian Bay and 2,000,000 feet from Cheboygan to their mills at the River Rouge. The Delta Lumber Co., which has bought the Moffat mill, will raft 4,000,000 feet from Georgian Bay and 12,000,000 feet from Manistique.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

Lake line boats will start next Sunday.

The Canadian steambarge Sequin is being generally overhauled at the Union dry dock.

Over $5,000 has been appropriated for deepening Erie basin between slip No. 2 and West Genessee St. This will be done as soon as possible.

The managers of the excursion boats have resolved to shut down on free rides this season Courtesies extended in former years have been sadly abused.

The city is dredging the rock from the creek channel above the Erie elevator. A depth of 19 feet will be made to a point above the Delaware & Hudson trestle.

The new tug on the stocks at the Union Dry Dock Co, which was built for O. W. Cheney, has been sold to Hand & Johnson She will take the place of the Cascade.

Capt. Patrick O'Neil, who formerly commanded the Wolf, Dyer and Davidson, has given up sailing, and is running a news stand and tobacco store at the foot of Main street.

Fitting-out work on the North West is progrecsing rapidly, as are also the repairs to the Lackawanna fleet The Wyoming and Florida are having some timbers replaced, and are being partially replanked.

Capt. Alex Clark has made over his vessel brokerage and insurance business to Capt. John Hall, and has accepted the position of general manager for the Buffalo Shipchandlery & Supply Co, in the store formerly used by Parish & Co.

The steamer State of Ohio was warmly welcomed on her arrival here last Thursday by a large crowd who had assembled on the docks to witness the first arrival of the season. She found it impossible to get away this (Wednesday) evening on account of the ice jam, which has again closed navigation.

Harbormaster Soper caused quite a stir among vesselmen Tuesday morning. Vessels were lying three abreast at the Erie elevator, and as the steamer Lockwood was to unload there, the harbormaster ordered them to move. Some argument arose as to whether the vessels were obliged to move, but Mr. Soper decided the question by sending for two tugs, and had the work done with dispatch.

ESCANABA, MICH.

Special Correspondence to The Marine Record.

Ore boats are expected here this week to load.

The Eleven foot shoal light-ship No. 60 was towed out to her position last Friday.

The ice cleared out of Little Bay De Nocque as far as Gladstone, Tuesday, April 16.

Tugs Pilgrim and Unknown arrived from Washington Island Wednesday, the first of the season.

Work was commenced April 15, filling up the ore docks here. All five of the docks will be in use this season.

Saw mills all around the bay are starting up. There is a large amount of cedar to be shipped from here this season.

The steamers Fannie C. Hart and W. C. Moore of the

Hart line, arrived here Saturday morning from Green Bay with full cargoes.

Capt. James Hewlett has his schooner Jane Anderson fitted out. He will leave this week for Traverse Bay to load produce for Chicago.

Marquette parties have purchased the passenger steamer City of Marquette, now laid up in Kewaunee, Wis. Capt. Taylor, of Escanaba, will be in charge.

It is stated around town that Mike O'Brien will have the only trimming gang on the dock, and that he will use one of the steam trimmers, trimming ore for 2½ cents.

The new passenger steamer Lotus will look A1 when she comes out Monday to go on her usual route between Escanaba and Gladstone. She will make three round trips a day between Escanaba and Garth. Capt. Dan Norton will sail her.

The Escanaba Towing & Wrecking Co. have fitted out their three tugs for work this season. The Owen will be engaged at Gladstone. The Delta at this port and the Monarch will be ready for any wrecking job that comes her way.

The passenger steamer Laura, recently purchased by Escanaba and Gladstone parties, is expected here this week to go on the route between Gladstone and Manistee. She has a charter to carry 50,000 barrels of salt from Manistee to Gladstone.

Five weeks ago, while out hunting, Capt. W. H. Van Dyke received a charge of shot through his right wrist, breaking most of the bones and leaving a wound which will lay him up most of the season. He has his schooner Letty May for sale as he cannot handle her this season.

A despatch from Iron Mountain says: The Chapin mines has commenced sending ore to the Escanaba docks and the season shipment will exceed 500,000 tons in the stock pile. The Chicago & Northwestern will handle the business exclusively this year. Last season the St. Paul handled half the product.

Capt. Geo. Shipman, who owned and sailed the small passenger steamer Allie Shipman between Escanaba, Gladstone and Garth, has recently purchased the large side-wheeler Queen of the Lakes, and is now putting her in good condition for the same route. The Queen of the Lakes was formerly owned by the Elk Rapids Iron Co. Capt. Shipman has taken the cabins off the Allie and will use her for towing purposes.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

Vessels are beginning to leave this port to load ore at Escanaba.

It is reported that the steamer Bon Voyage will take the place of the Nyack on the Muskegon route.

A large amount of wheat will come here from Duluth this season. The lake freight rate is now 2½c.

The accumulation of flour at this point for shipment to Buffalo, Erie and Ogdensburg by regular line steamers is reported to be very light thus far. However, more package freight than usual at this season of the year has accumulated at the lower lake terminals.

Contractor Love has closed a contract with the Goodrich Transportation Co. to drive 500 piles at their new dock at Muskegon. They will be driven along the dock and a string of piles four feet apart will be driven parallel with the dock, making a channel for the boats. The improvement will be 300 feet long and will cost $4,000.

TORONTO, CANADA.

Special Correspondence to The Marine Record.

To take advantage of the opening of the Welland Canal there was a general exodus of vessels from this port last Saturday and Monday, so that the harbor at some points appears quite deserted.

A couple of small ferry boats are plying between the city and Hiawatha Island every day, and the steamer Lakeside is doing a diurnal run between St. Catharine and this port and back with freight and some passengers.

Several vessels have gone to Toledo and Cleveland to load grain or lumber for Montreal.

There are three schooners, Jessie Drummond, Albacore, and St. Louis, carrying coal across Lake Ontario from south shore ports to Toronto. The rate is 28 and 29 cents.

The contract for dredging the slips has been awarded to Messrs Rankin, and they are fitting out their dredges preparatory to beginning work this week.

COLLINGWOOD, ONT.

Special Correspondence to The Marine Record.

Steam was raised on one of the boilers of the City of Collingwood on Thursday.

Mr. J. W. Fitzgerald has disposed of the yacht Carleton to Mr. W. F. Thompson.

Capt. Gil Pearsall has gone to Spanish River to fit out the tug of the Spanish River Lumber Co.

Messrs. Jas. Playfair & Co., have purchased the steam barge W. B. Hall. The new owners intend to use the barge in connection with their extensive lumbering business.

Capt. Pratt has been overhauling the yacht Emma at Parry Sound. The boat will be engaged in towing at Moon River until the tourist season. Mr. Pratt is building a scow for the transfer of freight.

The owner of the tug Alfred Morrill, has contracted with Messrs. Doolittle & Anderson, to tow twenty million feet of logs from Moon River to Waubuno Island. At the Island the logs will be rafted preparatory to being taken in tow by larger tugs.

Local freight and passenger business ought to be better this year than last, owing to the large amount of work going on at the Sault and the increase of sawmilling. Managers of the local lines think they have a grievance inasmuch as the larger importers at the Sault give much of their freight to the tramp steamers, leaving only the smaller or more urgent consignments for the steamers that give them a regular service. They would like these vessels to abandon the Mackinac trips and make the Sault the terminus, and if they hope to bring this about they should offer every possible inducement in the way of business.

In the notice to mariners No. 1, of 1895 there is an error in the directions for entering Collingwood harbor. These directions should be:—"To enter the harbor from the westward keep about half a mile off-shore until the inner light opens a little eastward of the breakwater pier light, then haul for the former, bearing south three degrees thirty minutes east, and have the west breakwater distant 25 yards on the starboard hand. Keep heading for the inner light until within 100 yards of it, when haul gradually for the wharves." In the daytime the range for entering is Carpenter's windmill, in the town, in line with the inner light, bearing south three degrees thirty minutes east. If the breakwater light were 250 feet distant in passing, as advised in notice No. 1, it would throw vessels on to the spit running out from the east breakwater pier.

ALPENA AND SAGINAW BAY.

Special Correspondence to The Marine Record.

Carkin, Stickney & Cram, of Saginaw, it is said, have decided to take the engine and boiler out of the tug Jim Pullar and place the engine in the tow barge Alaska, which will be converted into a steambarge. The boiler of the Pullar is to be used in a new tug to be built for them by the Wolverine Dry Dock Co., of Port Huron.

Comstock's schooner Voges has the honor of being the first lumber vessel to open the season at Alpena. She is loading at Pack's mill, with timber for Detroit.

The steamer Ossifrage of the Alpena-Bay City route went into commission Monday. Capt Byron Armstrong is in command, with William Allen as first mate, Dennis Degan second, Jesse A. Braman as engineer, J. W. Keith as clerk and J. H. Brown as steward.

LORAIN, OHIO.

Special Correspondence to The Marine Record.

Capt. Dan Titus will sail the schooner Red, White and Blue, which is being repaired. She was not taken out last summer.

The schooner J. B. Ketcham will go into commission sometime this week, with Anson Titus as captain and M. Larsen as mate.

Capt. O. E. Bullock will give orders in the schooner Maumee Valley this season. She is being painted and fitted out, and will soon go into commission.

Capt. A. E. Bullock has been appointed master of the schooner Alice B. Norris. She is now owned by the Niagara Paper Co., and will be used for carrying lumber and pulpwood.

The schooner Kate Winslow is receiving about $3,500 in repairs, and she will not be ready for sea inside of a fortnight. Capt. W. M. Duff and mate John Nelson will have charge of her.

The schooner Smith & Post will be ready to load in about two weeks. New deck beams have been put in throughout and other extensive repairs are being made. Capt. S. J. Butman will sail her.

The steamer Juno came over from Windsor last week. This was her first trip after a thorough rebuild at Walkerville, where she was lengthened 35 feet, her total length being now 155 feet. She loaded coal for Windsor. She is sailed by Capt. Wm. Allen, with his son W. W. Allen, as mate.

The C. L. & W. Railroad Co.'s new tug Cascade pleases everybody. She reached here last Wednesday at noon, after a fine run from Buffalo. She has a 25 by 28 inch engine, and has steam steering gear, operated with a lever. Capt. James Bowen is in command, with Myron Mitchell at the throttle.

CLEVELAND, O.

Special Correspondence to The Marine Record.

Daily service between this port and Detroit will be started next Monday.

Capt. George Warner has been appointed harbor-master at this port to succeed Capt. Peter Lynch.

The fish tug Hope is to be sold by the United States Marshal, Saturday, at Ashtabula, to satisfy a number of claims.

The Shipmasters lodge held their last session on Friday, an adjournment was voted on until December 13 next and carried unanimously.

The Standard Contracting Co , has begun work on the Cuddy-Mullen dock east of the river in the outer harbor. It will be completed in sixty days.

The death of Capt. W. B. Scott was a surprise to all local marine men although it was known that the captain had been failing in health for some time past.

The Brown Hoisting and Conveying Machine Co., have purchased all rights to the car dumping machine invented by Capt. I. B. Wier of Perry, O., for which he secured a patent about twelve years ago.

A larger number of people attended the launch of the Chili at the yards of the Cleveland Ship Building Co., on Saturday last, than has ever been seen there before. Miss Drake, daughter of Capt. M. M. Drake, gracefully performed the christening ceremony.

Mr. William Wilson, brother of Capt. Thomas Wilson, of the Wilson Transit Co., died on Wednesday at his residence, No. 713 East Prospect street, of lung trouble. Mr. Wilson was a stockholder in the Wilson Transit Co. and was well and favorably known by vessel men all over the lakes. His wife, two sons and one daughter survive him. Deceased was fifty-eight years old. The funeral will take place Saturday afternoon at 2 o'clock, from his late residence, and it is expected that many vesselmen will attend the services.

TOLEDO, OHIO.

Special Correspondence to The Marine Record.

The tug H. P. Roby is getting a new rudder.

The first cargo received at this port was a cargo of sand on the little schooner Nellie Duff.

The schooner Panobee, for St. Clair; steamer Walter D., for Dresden; and schooner Itasca, for Harbor Springs, have been loading coal here.

The little side-wheel steamer Evening Star, which ran up and down Detroit River in the 70's, and which more lately ran in the excursion business out of this port, has been dismantled and condemned.

The Toledo harbor tug line has been formed with Commodore L. S. Sullivan as manager and treasurer. The line is composed of the following named tugs: S. C. Schenck, Roy L. Birckhead, Fannie L. Baker, A. Andrews Jr., Frank S. Butler, T. M. Moore, Uncle Sam, Joseph S. Spinney, Wm. E. Rooney.

Mr. W. J. Staples has retired from membership in the firm of the American Steam Packing Co., Boston, Mass., though the business will be conducted under the same management as formerly. The American handles the well-known favorite "T" core packing.

A BAY CITY INDUSTRY.

The Dry Dock Iron Co., Bay City, Mich., are having pronounced success with their sectional steel propeller wheels. A number of these wheels are now in use and they are making at the present time seven new wheels for as many different lake craft. A specialty which the Dry Dock Iron Works Co. are making quite a plunge in is the low pressnre steam syphon working on fifteen pounds of steam and throwing a greater volume of water than any other syphon manufactured. The ultimate adoption of this syphon in a majority of the lake tonnage seems but a question of pushing it to the front as its merits warrants.

NEW FORM OF LAKE HULL POLICY.

A1 STEAM.—As employment may offer, in port and at sea, in docks and graving docks, and on ways, gridirons and pontoons, at all times, in all places, and on all occasions, services and trades whatsoever and wheresoever, excepting the carrying of quicklime in the lower hold, under steam or sail, with leave to sail with or without pilots, to tow and assist vessels or craft in all situations, and to be towed, and to save or aid, and to attempt to save or aid life, person or property, also to store cargo during the winter season, and to move from dock to dock in winter harbor, to load and unload cargo.

In all cases when carrying grain cargoes in bulk, the vessel hereby insured shall have the same secured by good and sufficient shifting-boards, properly and securely put in place, so as to effectually prevent the shifting of the cargo.

Touching the adventures and the perils which the said assurers are content to bear and do take upon themselves by this policy, they are of the lakes, rivers, harbors, bays and canals, fire and explosions, collisions, jettisons, barratry of the master or mariners, and all other perils, losses and misfortunes that have, or shall come to the hurt, detriment or damage, of said vessel or any part thereof.

Warranted that the vessel shall not be engaged in navigation from December 10, 1895, to April 1, 1896, but any breach of this warranty shall vitiate this insurance only during the continuance of such breach.

In the event of the vessel being at sea later than noon of the 10th of December, it is hereby agreed to hold the assured covered against such additional risk up to arrival in port, in consideration of an additional premium, pro rata of the season rate, notification of such extension being given to assurer prior to noon of the 10th of December.

Warranted free from average under three per cent. unless general, or the ship be stranded, sunk, burnt, or in collision with any other ship or vessel, or with rafts, wrecks, docks or rocks, or with any substance or thing other than water.

Average payable on each valuation separately, or on the whole, without deduction of one-third, whether the average be particular or general.

General average and all claims hereunder shall be adjusted and paid as noted below, and in case of loss, such loss shall be paid in 60 days after presentation of proof of interest.

In case of loss or misfortune, it shall be lawful and necessary that the assured or assigns, shall give prompt notice of the disaster.

There shall be no right to abandon under this policy, unless the amount for which the assurers would be liable under an adjustment as of partial loss would exceed half the insured value of the vessel, and no abandonment in any case shall be effectual unless made in writing and delivered to.

The assured shall not assign its interest in the vessel hereby insured, or in this insurance, or any part thereof, without the written consent of the insurer. No charter or mortgage now or hereafter existing shall, nor shall anything connected with such charter or mortgage except the absolute termination of all interest of the assured in the vessel, terminate or affect the insurance herein.

In adjusting and determining any and all losses, damages and amounts under this policy, the valuation stated therein shall be considered the value of the vessel.

In case of any loss under this policy, upon payment thereof to the assured, the assurer shall have an interest in any claims for causing such loss (if it shall not be caused as hereinafter mentioned), which shall bear the same proportion to the whole amount thereof, as the amount above insured on the vessel bears to the valuation thereof.

In case any loss, damage, or charge shall be caused by the vessel above named, or by any property whatever owned by the assured, or by an act, matter or thing in or connected with the construction, equipment, navigation, occupation, employment, or use of any such vessel or property, whether by negligence or otherwise, no claim or interest in any claim shall hereunder, by subrogation or otherwise, belong to or inure to the benefit of the assurer.

Warranted free from capture, seizure, or detention, and the consequences of any attempt thereat, and all other consequences of hostilities (piracy excepted).

This insurance also specially to cover loss of, or damage to the hull or machinery, through the negligence of master, mariners, engineers or pilots, or through explosions, bursting of boilers, breaking of shafts, or through any latent defect in the machinery or hull, provided such loss or damage has not resulted from want of due diligence of the owners of the ship, or any of them, or of the manager.

And in case of any loss or misfortune, it shall be lawful for the assured, their factors, servants and assigns to sue, labor and travel for, in and about the defense, safeguard and recovery of the said ship, etc., or any part thereof without prejudice to this insurance; to the charges whereof the said insurance company will contribute according to the rate and quantity of the sum herein assured. And it is especially declared and agreed that no acts of the insurer or insured in recovering, saving or preserving the property insured shall be considered as a waiver or acceptance of abandonment; having been paid the consideration for this insurance by the assured or....assigns, at and after the rate of....per cent. To return....per cent. for every 15 consecutive days the vessel may be laid up in port or in dock between May 1st and December 10th, noon (Chicago time), during such period the vessel being at the risk of the underwriters. To return....per cent. for every 30 days of unexpired time between April 5th and December 10th, noon. (Chicago time) and....per cent. for the period after December 10th, to expiration, if this policy be cancelled and arrival.

Each voyage subject to separate average.

With liberty to discharge, exchange and take on board goods, specie, passengers and stores, wherever the vessel may call at or proceed to without being deemed a deviation, and with liberty to carry goods, live cattle, etc., on deck or otherwise, and liable for contribution toward the jettison of goods, and other property on deck if under cover.

And it is further agreed that if the ship hereby insured shall come into collision with any other ship or vessel, or with docks, piers, wharves, rafts or bridges, and the assured shall in consequence thereof become liable to pay and shall pay by way of damages to any other person or persons, any sum or sums not exceeding in respect of any one such collision the value of the ship hereby insured, we, the assurers, will pay the assured such proportion of such sum or sums so paid as our subscription hereto bears to the value of the ship hereby insured, and in cases in which the liability of the ship has been contested with our consent in writing, we, the assurers will also pay a like proportion of the costs which the assured shall thereby incur or be compelled to pay; but, when both vessels are to blame, then, unless the liability of the owners of one or both of such vessels becomes limited by law, claims under this clause shall be settled on the principle of cross liabilities as if the owners of each vessel had been compelled to pay to the owners of the other of such vessels such one-half or other proportion of the latter's damages, as may have been properly allowed in ascertaining the balance or sum payable by or to the assured in consequence of such collision.

Provided always that this clause shall in no case extend to any sum which the assured may become liable to pay, or shall pay for removal of obstructions under statutory powers, consequent upon such collisions, or in respect of the cargo or engagements of the insured vessel, or for the loss of life or personal injury.

And it is further agreed that the principles involved in this collision clause shall apply to the case where the vessels are the property in part or in whole of the same owners.

It is agreed that all claims under this policy shall be void unless prosecuted within one year from the date of loss.

It is agreed that in case the notes or obligations given for the premium herefor, or for any part thereof, be not paid at maturity, the whole premium shall be considered as earned and this policy shall be and remain void while said past due notes or obligations, or any part thereof, remain overdue and unpaid.

N. B.—This policy is subject to the usages and regulations of the port of New York, as to all matters of adjustment and settlement of losses not herein specified and provided for, and the adjustment of any loss hereunder shall be made by a competent adjuster of marine losses who shall be designated by the insurers.

A1 SAIL.—In the policy for sailing craft on the first letter, the time of navigation is limited to Dec. 5, or if sailing later an additional premium of two per cent. of the season rate is to be exacted, also warranted free from average under four per cent. unless general, or the ship be stranded, burnt or sunk in collision with any substance or thing other than water.

SUEZ VERSUS SAULT CANAL.

In an article prepared for the Cleveland Chamber of Commerce, Mr. Joseph R. Oldham, a member of the navigation committee, points out a discrepancy in apparent canal traffic which THE RECORD has time and again dwelt upon in a similar strain. In dealing with this subject Mr. Oldham says:

"It is well known that the number of vessel passages through the St. Mary's Falls Canal is much larger than the number of vessel passages through the Suez Canal per annum, the number of such passages being as follows, viz.: Suez Canal, 3,352; St. Mary's Falls Canal, 14,491, the tonnage of the former being 8,059,105 tons and of the latter 13,110,366 tons. Thus you will see that the tonnage passing our canal is 6½ per cent. greater than the tonnage passing the Egyptian canal.

"It must not, however, be inferred from this that our fleet of vessels is greater than the world's fleet passing the Suez Canal. When comparing the tonnage of shipping passing the St. Mary's Falls Canal and the African waterway, such a comparison cannot but be misleading if the elements of time required for the average voyages respectively be omitted from such investigations. The average steaming time of the foreign steamer passing the Suez Canal is about 60 days; the corresponding average time of the lake steamer passing the St. Mary's Falls Canal is about five days, and the average tonnage of such foreign steamers is about 2,300 tons, whereas the average tonnage of our lake steamers passing the "Soo" Canal is but 860 tons. The mere act of an aggregation of undenominated tonnage or the numerical transit of passengers passing a certain point should not be accepted as a measure of the capacity, speed or value of the vessel property owned by a certain nation or city, for, judged by that standard alone, a large New York ferry boat would appear to have about twelve times the capacity of all the Atlantic liners trading to New York City, for such a ferry boat could carry across the East River in one month as many passengers as all the Atlantic mail boats disembark at New York in twelve months. The comparison commonly made between the Sault and the Suez Canals is in no sense misleading with regard to the freight transported from Lake Superior to Lake Erie, which tonnage is so enormous and so progressive as to render any exaggeration not only unnecessary, but absolutely baneful."

NOTES.

TRYING to do business without advertising is like winking at a pretty girl through a pair of green goggles. You may know what you are doing, but nobody else does.

THE Crawley & Johnston "Cincinnati" automatic steam stearing gear will be fitted on the steamer H. F. Frisbee, owned by the Huntington & St. Louis Tow Boat Co., of Cincinnati. This Ohio manufacture of steam stearing gear is steadily gaining friends and patronage throughout the west and southern territory.

MESSRS. HECOX & HEICHHOLD, city editors of the *Soo Democrat* and Sault Ste. Marie *News* respectively, have established a marine reporting bureau at Sault Ste. Marie, and will cover marine happenings from Detour to Whitefish Point. Their service is bound to be an excellent one as they are both experienced newspaper men with a keen attention directed towards marine affairs.

TWO hundred and fifty business men from Davenport, Ia., Rock Island and Moline, Ill., journeyed by boat seven miles up the Hennepin Canal, last week, to congratulate Capt. Marshall, corps of engineers U. S. A., and themselves upon the formal opening of the west 17 miles of the Hennepin Canal completed last fall, and so does the Chicago open sewer progress toward accomplishment. The locks worked in perfect shape.

THE reported invention of an electrical device whereby the approach of vessels at sea will be signaled to them when they are as much as six miles apart is important, if true, and there is no reason to doubt that such an invention may have been made, as inductive effects take place over very long distances. Such a device, if successful, would not only prevent collisions at sea, but would protect war vessels from surprise, and perhaps give notice of the approach of submerged torpedoes.

THE Joseph Dixon Crucible Co., established in 1827, are the most extensive manufacturers of graphite products in the world. Their manufactures comprise plumbago, crucibles, graphite facings, retorts and other goods used in foundries and smelting works; lubricating graphite, graphite greases, graphite paints and Dixon's celebrated American graphite pencils, and carburet of iron stove polish. These goods find their way and meet ready sale in all the cities and towns of the civilized world.

THE BOAT THAT BROUGHT HIM OVER.

An interesting anecdote is told of the late Capt. Theodore Julius, whose death occurred within the past week. Some time ago Capt. Julius went over to a shipyard in Camden, N. J., to take a look at the old packet ship Tonawanda, which was being converted into a coal barge. The captain took a particular interest in the old ship, because of his having served as mate aboard her in the early sixties. While he stood watching the old vessel, a stranger approached him and asked: "Isn't your name Julius?" The captain replied in the affirmative. "You were chief mate on that ship in the summer of 1863?" "Yes," said the captain. "You don't remember me," continued the stranger, "but I remember you very well. I was a steerage passenger on the Tonawanda at that time, being on my way to this country. I've been pretty prosperous, and I've just bought the old ship, and am going to make a coal barge of her. Strange isn't it, that I should come to own the ship that brought me, practically penniless, to this country?" The name of tho old western ocean packet ship reminds us of the story told on Pat, who, when asked one morning in Liverpool where he was going to, replied that "he had a job to bushel pig iron in the big ship Tunderingwonder, lying in the Waterloo dock."

A WELL-KNOWN LIFE-SAVER.

Capt. Donald McKenzie and wife are duly settled in their new home in Duluth, whither the captain was recently transferred from the Middle Island life-saving station, Lake Huron, to take charge of the new station at the head of the lakes. On a recent Saturday, Capt. McKenzie was invited to the Masonic parlors by some Knights of Alpena Commandery. One after another dropped in until about thirty were present, when the banquet hall was thrown open and a tempting feast was enjoyed, the genial captain being the honored guest. In the middle of the festivities he was presented with a beautiful silver tea service as a parting memento.

CAPT. DONALD McKENZIE, U. S. L. S. S., DULUTH.

Capt. McKenzie has been in charge of the Middle Island station since it was established, about 14 years ago, and the crew, under his charge, have made a splendid record. Capt. McKenzie was born in Inverness in the north of Scotland, Feb. 17, 1844, and his boyhood training consisted of service on the fishing craft and colliers of the North Sea, which visited most of the British and a number of continental ports. After the civil war he came to America and shipped in the New England-New York coasting trade. This continued until 1871 or '72, when he started on a western tour visiting most of the principal lake ports, and pushing on to the Mississippi, Ohio and Missouri Rivers. In 1874, he returned to the lakes, and having married about this time, remained in Detroit until Sept. 1, 1876, when he entered the life-saving service as surfman at "Hammonds," at $40 per month. Five and one-half months then constituted the season. He modestly believes that from that time until 1881, he lived the ordinary life of a surfman, but the records show that he took a leading part in many heroic rescues. In the latter year he took charge of the Middle Island station, having refused the keeper's place at a Lake Superior station four years prior. In the language of an Alpena paper it is safe to say that there is no abler officer nor finer gentleman in the life-saving service, and every one will wish Capt. McKenzie and his estimable wife continued prosperity and happiness in their new field of duty.

TOO MUCH CREDIT ASCRIBED.

BALTIMORE, MD., April 22, 1895.

To the Editor of The Marine Record:

Referring to the repeal by the late Congress of the provision of law for giving bonds on taking out marine papers, permit me to say that the credit for that act belongs originally to Thomas B. Sanders, for many years chief clerk and deputy commissioner of navigation. There have been five commissioners in all, and I think every one of them recommended the repeal in question. I know that the undersigned did, and that Senator Frye has for several years endeavored to have a bill passed to effect it. It is therefore not quite accurate to ascribe to the present Commissioner of Navigation the credit due to others for this reform. I have seen him credited for my own work in preparing bills to be passed. The discredit of the free-ship bill nobody will think belongs to any of his predecessors in office. That he should claim and with it be content. Yours truly,

WM. W. BATES.

VESSELS LOST.

The Bureau Veritas has published the list of maritime disasters reported during the month of February, 1895, concerning all flags.

Sailing vessels reported lost—26 American, 33 British, 3 Danish, 8 French, 6 German, 6 Italian, 13 Norwegian, 1 Russian, 2 Spanish, 4 Swedish; total, 102. In this number are included 19 vessels reported missing.

Steamers reported lost—4 American, 9 British, 1 Dutch, 3 French, 3 German, 1 Spanish; total, 21. In this number are included 5 steamers reported missing.

Causes of losses—Sailing vessels: Stranding 37, collision 3, fire 1, foundered 4, abandoned 33, condemned 5, missing 19; total 102. Steamers: Stranding 13, fire 1, foundered 1, abandoned 1, missing 5; total 21.

THE OUTLOOK FROM A CANADIAN STANDPOINT.

Speaking of the general outlook for the coming season Capt. Solomon Sylvester, one of Toronto's best informed vessel owners, gives it as his opinion that indications are decidedly improved from a year ago. Reports of improvement in sales of commodities in different places continue to come forward, and a general revival of business in all branches of trade is good for the shipping business. More wool has been purchased already this spring than was bought all last season, so that the mills are likely to be kept running with vigor. "Then Again," said the captain, "the improvement in the grain market is important, but we want a general improvement which seems on the eve of advent. We never before had the stock of grain in this continent that we have at present to be moved. Yes, there will be lots of lumber, timber and grain to move this spring. Already as much lumber has changed hands as did all last season. That in itself is a healthy sign. Also there are vastly increased quantities of ore to go out. About 7,000,000 or more tons have already been sold. Rates are low, I do admit," exclaimed the captain, emphatically, "but I would not care if they fell half as low again as they are so long as we have an active season. What is the advantage of high rates with nothing moving most of the time? To add to the indications of future inprovement we have the staidness which has again come into the American money market. There is not nearly so much want of confidence in securities as existed a year ago. The general improvement may not develop until September, or it may come as early as June, but it will not be immediately. If crops should prove a failure in Europe more money will be called out from that country, and we shall reap the benefit, but even if all crops are good the prospects are not discouraging."

MARITIME LAW.

HENRY J. NORTON vs. SCHOONER RICHARD WINSLOW.

Judge Seaman, of the United States Court, filed his opinion at Milwaukee, last Thursday, in the libel case of Henry J. Norton against the schooner Richard Winslow, setting forth his conclusion on which the order of dismissal was entered. The suit is an important one, presenting questions of new interest to shippers and vessel owners, and Judge Seaman expresses the hope that an appeal will be taken.

The Winslow left Chicago on Nov. 16, 1893, with a cargo of corn, in good condition, to be carried to Buffalo. The bill of lading gave the shipper the option of unloading on or before April 1, 1894. The vessel reached Buffalo Nov. 22, 1893, and the corn was not removed until April 7, 1894. The vessel in the meantime was moored at a wharf by the direction of the shipper and remained in charge of the master as shipkeeper during the winter. In February heavy gales occurred which drove the water out of the harbor, causing the schooner to touch the bottom so that she strained the butts of her deck, hatch coamings and mast partners, and in consequence part of the cargo was damaged to the estimated amount of $2202.64.

Negligence in caring for the schooner after she righted was charged. The practice of utilizing vessels when laid up for winter as storehouses for grain, Judge Seaman states, has become quite general, and in view of this fact he has given the case special consideration. In the hope and expectation that an appeal will be taken but a brief statement of the conclusions are given. Judge Seaman finds that the vessel owner was not an insurer, nor was he to be held to the exercise of all possible care. If any cause of action is shown it is not within the cognizance of admiralty. With the termination of the carriage the water-borne character of the contract ceased and the vessel was converted into a mere storehouse. Jurisdiction of that liability does not pertain to admiralty. The storage was not incident to the transportation.

OBITUARY.

CAPT. W. B. SCOTT.

Vessel circles in Cleveland heard with regret of the death of Capt. W. B. Scott, on Friday last, following so close as it did on the loss of his only son, who was thrown out of a carriage a few weeks ago and received fatal injuries.

Capt. Walter B. Scott was born in Somersetshire, England, about the year 1830. At a very early age he shipped as galley boy in a small African trader and for about twelve years sailed steadily until he had touched at almost every seaport in the world. Drifting toward the lakes about forty years ago, at a time when marlin-spike sailors were required to cut and fit rigging, as well as to handle the sail vessels then in use, it was not long before the young salty obtained command of a schooner a position which was thought something of in those days, and as he conducted his business successfully, he secured better commands each year until about twenty-five years ago, when he quit sailing and engaged in the marine insurance business at Cleveland, retiring after the death of his wife a few years ago, with a competency.

CAPT. W. B. SCOTT.

Among the older members of the vessel owning and sailing community Capt. Scott was well liked, his advice was generally followed in marine insurance matters, and he was respected for his business qualifications, as well as his social and genial manner.

The funeral of the late captain took place on Monday and was attended by many of his marine friends. The funeral services were conducted by the rector of St. Mark's Episcopal church. The pall-bearers were Capts. John W. Moore, William Cummings, H. M. Murch, John H. Palmer, George Warner, and Frank Brown.

THE MARINE RECORD

ESTABLISHED 1878.

PUBLISHED EVERY THURSDAY, AT 144 SUPERIOR ST., (LEADER BUILDING), CLEVELAND, O.

IRVING B. SMITH, CAPT. JOHN SWAINSON, } . . . PROPRIETORS

BRANCH OFFICE:

CHICAGO, ILL., ... 238 Lake Street.

THOMAS WILLIAMS, Associate Editor.

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CLEVELAND, O., APRIL 25, 1895.

THE Treasury Department U. S. Life Saving Service, Washington, D. C., will receive proposals up to May 17 for the construction of twelve, twenty-six feet, Monomoy surfboats, six of which are to be delivered in Buffalo and six in New York city. It is evident that the present chief of the life-saving service desires to keep up the high standard of efficiency to which the service has attained and it is also worthy of note that six of the above boats are to be delivered at Buffalo presumably for use at lake stations.

A SUM of $68,000 was collected in tolls from vessels using the St. Mary's Falls Canal when it was owned by the State of Michigan, over and above the actual cost of keep-up. When the canal was taken over by the Federal government in 1881, this balance was made a trust fund for the erection of a dry dock at Sault Ste. Marie. The amount has never been called for, and it does not seem the intention of the government to place a dry dock at that point, therefore, it is now requested that the sum, with interest to date be allotted to the building of a marine hospital, and it is likely to go that way. We know of no better.

STEEL vessels for all purposes is the order of the day and no shipyard is complete without a steel plant. The old established yards of the Detroit Dry Dock Co., are equipped to build metal, composite or wooden hulls and in this respect bears the reputation of being one of the best equipped shipbuilding plants on the lakes and they have just contracted to build a large side-wheel passenger steamer for the C. & B. Line. Several yards have an excellent location and every modern facility for building metal vessels alone, now Capt. James Davidson the most prominent wooden shipbuilder on the lakes intends adding a fine steel plant and will, besides holding his yard open for all classes of wooden tonnage, enter into competition for building metal vessels. This departure is in line with modern requirements.

THE NEW FORM OF HULL POLICY.

Reference was made in a former issue of THE RECORD to the new form of hull policy which is being presented to the owners of A1 tonnage, and we print in this issue a copy of the policy which we took occasion to comment upon last week.

It should first be understood that there is an apparent discrimination more widely drawn than formerly in the favored classes. We hold that the new form of hull policy should be offered generally to all owners of lake vessels and not as has been attempted, to a special few. A comparison of the wording of this new form of policy with that in use on A2 vessels shows a marked difference in favor of the owners of A1 steel and wood as against the owners of A2 vessels. Last season only the metal boats had what was called the steel form of policy, which practically waived the average, and granted full indemnity in case of collision with any substance other than water, such as damage done by contact with piers, docks, rocks, rafts and the like. The new form of policy is still very different from the steel form of last season as a careful perusal by those interested will show. In this connection we may call attention particularly to the application of the average on the separate valuations of the hull, engines and machinery. There is no question but that the new form of policy can be considered a very progressive one as it clears away much that was in doubt on the old form, making clear a number of points about which there has been more or less dispute between the assurer and the assured.

While the tariff of 1894 is again cut on the A1 metal and wooden boats, it remains intact on everything below A1½. Agencies that have taken care of risks on A1 hulls as high as $115,000, will not, as far as we can learn, go above $15,000 on an A2 class; the excuse, if such it may be called, being that they have lost enough money on low class risks; so that owners whose fleets do not comprise any vessels rated A2 are placed at a decided advantage over those owners having boats of a low grade character, and the owner whose vessels are entirely in the A2 class is, or soon will experience difficulty in securing the protection that has been so readily accorded him in the past. Whether this feature will redound to the general prosperity of underwriters we do not undertake to judge, but presume that the entire question has been thoroughly gone over by the agents doing business for underwriting firms and companies.

Another feature that we learn is being contemplated by marine insurance companies is the covering of the owner's liability to employes, also the owner's outside liability covering accidents to those not actually in the employ of the vessel owner, and the premium charged for this new departure in marine insurance is a percentage based on the pay rolls, a very equitable way no doubt of arriving at the amount of premium to be paid on such a casualty risk or accident policy. Some vessel owners have policies already in companies specially incorporated for the purpose of furnishing protection in the case of accident to employes, and it is evident that this feature may be generally introduced by lake insurance companies, although it seems to us a question of considerable doubt whether or not a company incorporated to do a positive and strictly marine business can legally grant such protection.

BE NOT TOO PATERNAL.

THE superintendent of the New York Maritime Exchange deplores the unusual number of marine disasters during the past year and recommends that the Government shall maintain at that port a revenue cutter officered and manned with a view to service when necessary to render assistance to vessels in distress. He also referred to the Grant and Perry being transferred to the Pacific thus leaving New York in a manner unprotected.

Well! of course it is a highly laudable undertaking for any government to endeavour to ameliorate the condition of those in distress and more especially would it be so in the case of the United States, untrammeled as we are by old world prejudices, but, and there is a decided sort of, a but, when we consider the private towing, wrecking and contracting companies already established whose business it is to engage in the work of salving property, to render assistance to those in distress and to make tows whenever or wherever necessary.

There is just a possibility of paternalism being carried too far, and so that branches of the public service may be called upon to intrench upon the rights of private interests. Therefore we would say be not too paternal.

To show more clearly what we mean and in our desire to checkmate if not eradicate what we perceive to be a growing evil, let us cite the case of a vessel appearing off a harbor with the code signal P. T. flying. Boatmen and tugs are at hand as well as a revenue cutter and a pilot boat, perhaps in the offing, or even without the latter alternative. The two flag signal is understood by all to mean that the vessel requires piloting into the port or to an anchorage. Under these conditions the revenue cutter takes her in tow, or dispatches a boat to her, or the crew from an adjacent life-saving station speedily boards her and conducts her in safety to an anchorage, while the several private industries who are day and night engaged in trying to make a living at this identical business are given the go-by.

We have not drawn the strongest case possible where this government departmental assistance might amount to unwarrantable interference with the business and rights of private interests, sufficient if we have pointed out that it is only in the absence of assistance, or the futile attempts of incompetent equipment to meet the exigencies of the situation, should any of the government department tonnage or other aids attempt to compete with private enterprises in their work of piloting, salving, towing, etc, etc. The life-saving service is of course established for the purpose of saving life, the duties of the revenue cutter service are as clearly defined, now, if it will pay any port to have a marine patrol there is little question but that brains, energy and capital will be found in abundance among private citizens to meet the conditions without saddling upon or requiring such paternalism at the hands of the Federal Government.

A WEEK OF FREIGHTS.

The feature of the past week has been the sale of 50,000 tons of coal to the Chicago, St. Paul & Milwaukee Railroad, to be delivered at Green Bay by the Ohio & Pennsylvania Coal Co. The bidding on this was very lively and the price paid was not sufficient to warrant high freights. Transportation for some of this coal has been secured at 40 cents, which had been agreed to by some vessel men before the bids were filed.

A few more ore contracts have been closed at the old figures, and one contract from Escanaba, running through only a few months has been closed at 45 cents. It is thought that no more 40 cent wild charters from this port will be made, as the boats are said to be no longer under the necessity of getting these cargoes in order to come to Lake Erie.

The coal men are disposed to await the action of the miners on May 1, when new contracts are made, and some of the strikes usually settled. The fear of a strike has caused railroads and manufacturers in this state to secure for themselves supplies of coal sufficient to last six or eight weeks. This has prevented the coal coming to the lakes, and cargoes have been remarkably scarce.

LAUNCHES OF THE WEEK.

The week just ended has been notable for the additions to the floating property on the lakes by the launching of several boats.

At the Cleveland Ship Building Co.'s yard last Saturday, the 20th inst., was launched the steel steamer Chili, built to the order of Capt. Drake, of Buffalo; Capt. A. B. Wolvin, of Duluth; Wm. Dickinson, of Chicago; Capt. David Vance, of Milwaukee, and others, all of whom were present, at the launch, Capt. Wolvin stopping on his return to business after a southern trip. The Chili measures 342 and 324 by 42 and 27 feet. Her engines are triple expansion, 20, 33 and 54 by 40 inches, the two boilers being 12 feet by 4 inches by 13 feet. A 12 by 12 inch hoisting engine operates a fore and aft shafting, by which freight is lowered into and hoisted out of the hold. The Chili was christened by Miss Jennie Drake, a daughter of the managing owner. She will be ready for sea about June 1, and will carry 3,200 tons on 15 feet draft.

On the same day the steamer J. J. McWilliams, building at the Wheeler yard, West Bay City, was launched. She is building for the Mitchell-Gratwick syndicate, and is 370 feet over all, 352 between perpendiculars, 42 beam and 27 depth. Her engines are 20, 32 and 55 by 42 inches. Her boilers were made by Wicks Bros., of Saginaw, and are 13½ by 12 feet. She will be sailed by Capt. Charles B. Galton, of Algonac, with Edward Guy, of Marine City, as engineer. She is expected to be out in about four weeks.

The Detroit Dry-Dock Company launched, last Saturday, at their Orleans street yard, Detroit, a fine little lumber steamer, the Argo for C. R. Jones & Co., the Fisher-Wilson Lumber Company, and others, of Cleveland. Mrs. C. E. Fisher sprinkled the wine on her bow. She is a single decker, 203 feet in length, with 185 feet keel, 35½ feet beam and 15 feet depth, and will carry 800,000 feet of lumber on 12½ feet draft. Her engine is a fore and aft compound, 22 and 46 by 36 inches, with cylindrical boiler 12 feet 3 inches by 11 feet. She will carry two pole spars and one stack. She is expected to be out in three weeks and will tow two of the A. G. Comstock's barges.

Canada was not inactive in celebrating launch day. On Saturday last the new side-wheel steamer City of Toronto, which was launched from Capt. John Simpson's yard at Owen Sound. She is 162 feet long and 38 feet beam over the guards, and is owned by the North Shore Navigation Co., who will operate her on Georgian Bay. Capt. A. Cameron will command her.

At the yard of James Davidson, West Bay City, a

large schooner will be launched next week. She is to have a capacity of 100,000 bushels of wheat on 16 feet draft. During the past week two light draft barges were launched, which were built to carry lumber out of shallow harbors.

On Tuesday afternoon at 2:30 o'clock the steamship Majestic was launched at the yard of the Collingwood Dry Dock Co. The Majestic is a fine light draft passenger propeller, designed especially for the trade between Owen Sound and Collingwood, and the Sault, touching at all important Georgian Bay ports. Her dimensions are practically as follows: Over all, 225 feet; keel, 210; beam, 35; hold, 13 with eight feet space between the main and spar decks She will have a compound engine and two square fire-box boilers, the machinery being built by John Inglis & Sons, Toronto, upon designs furnished by Mr. A P. Rankin, of the firm of Logan & Rankin, Toronto. She is built to the order of the Great Northern Transit Co., and will carry about 200 passengers and 500 tons of freight. She will be brought out by Capt P. M. Campbell, commodore of the fleet, who superintended her construction. Miss Mary Long christened the steamer.

The steamer Jack, recently launched at Garden Island, near Kingston, Ont , is 180 feet long, 37 feet beam, and 14 feet hold. She has triple compound engines, 13½ and 36 inches in diameter respectively, and 36 inches stroke, proportions uncommon in this country, but very common in Great Britain. The boilers are of Siemens-Martin steel, Ætna water-tube type, and are said to be the first marine boilers of this class ever used in this country. They are to carry 160 pounds of steam to the square inch.

SHIPPING REGISTERS.

The Great Lakes Register of Shipping for 1895-6 contains the general dimensions of all the iron and steel vessels built on the lakes, also tables of scantlings, formula for ascertaining the dimensions of single plate rudders, notes bearing on the construction of small steel vessels, and amendments to the original rules of the "Great Lakes Register of Shipping." The effect of bending moment and shearing stresses experienced by ships is referred to, and remarks bearing on the chemical properties and the proper treatment of mild steel, and touching on the most modern practice in boiler shell riveting, are included in the present issue. Certain memoranda of strength and weight of materials, melting point of metals, transposition of knots into statute miles, and variation in draft of water for vessels from fresh into salt water or vice versa, have also been added by Joseph R. Oldham, naval architect and engineer, Cleveland, O.

The United States Standard Register of Shipping, New York, 1895--6, is a much larger and more inclusive volume than has hitherto been issued by this clssification society. Rules for the construction and classification of iron, steel, composite and wooden vessels for lake, coast and ocean service, are given in detail accompanied with illustrations. A new feature which has been added to the register this year is the channel system of construction, a departure under which several vessels are now being built at lake shipyards. Mr. Sinclair Stuart, chief surveyor of this register is well known on the lakes, and on his next visit will no doubt be highly complimented by his numerous shipbuilding and ship-owning friends for the excellent additions made in the register, and its enhanced value from an underwriter's standpoint.

VESSEL TAXATION IN MICHIGAN.

There is now before the Michigan legislature a bill introduced by Representative Waldo, of Detroit, regulating the taxation of vessels in that state. The new measure proposes to tax vessels at the places where the companies are organized, instead of at the port from which they do business, as the present law requires. Mr. Waldo considers it no more than right to allow vessel companies to organize where they please, for the purpose of securing lighter local taxation.

The question of vessel taxation is agitating more localities than one along the chain of lakes. It is reported that a Bay City vessel owning firm was recently asked to remove its headquarters to Chicago on the promise that they would not only be exempt from city and state taxes, but would be furnished a place for doing business free of charge. This rumor, however, seems to be too far-fetched.

Vesselmen say that if Michigan does not offer some inducement to ship-owners they will be forced to move away, and the good effects of the business they bring the state and cities will be lost to them, and likewise all of their taxes. One obnoxious feature of the bill which Mr. Waldo promises to remove by an amendment is that a vessel corporation's property could be attached for taxes only in the county where the company was organized, or in an adjoining one. This would, if not amended, allow a corporation organized in a certain county to escape taxation altogether. His amendment will provide for the attachment of vessel property for taxes in any part of the state.

LIFE-SAVERS.

Last season there were but seven hands at the Milwaukee station, this season there will be eight and a telephone has also been added to the equipment besides the station will display weather bureau signals, all tending to the conservancy of floating property.

It is now generally well known that Capt. Boutin has charge of the important station at Milwaukee. No. 1 is Charles Carland and in due order follows Ingar Olson, Frank Gerdis, Henry Sinniagan, Austin Gleason, Richard Wachsmuch, William Peterson and Charles Flansen. Capt. Boutin, keeper of the station, is an energetic and well-drilled officer in the life-saving service.

The life-saving station at Point Aux Barques, tenth district, opened the 16th inst., with the following crew: Keeper, H. D. Ferris; Samuel Neal, James Scott, Robt. Oliver, Herbert Walther, John Nabring, Peter Richards, Andrew Shaw, Jr., and Alfred Thompson.

APPOINTMENT OF OFFICERS FOR 1895.

	MASTER.	ENGINEER.
INTER-OCEAN TRANSPORTATION CO., MILWAUKEE.		
Str. Maryland	J. E. Yax	—. Davis
" Manchester	Timothy Kelly	Jas Grand
" Manhattan	H. F. Lotus	W. R Patterson
" Massachusetts	P. A Anderson	Wm. Ahem
" Merrimac	Matthew Smith	L. Allison
" Minnesota	B. Snifin	W. H. Pinkham
" Metacomet	W. L. Shields	.....
SPALDING LUMBER CO., CHICAGO.		
Prop. H. L. Worthington	Jos. Travis	H. F. Otto
Barge Wm. Jones	Oscar Clow	
" D. R. Martin	" "	
" T. J. Bronson	John Bates	
Schr. J. B. Wilbor	David Williams	

FLOTSAM, JETSAM AND LAGAN.

The schooner Wm. Crosthwaite is loading coal at Oswego.

The Straits lightships have taken up their positions. Walter McGinn succeeds Capt. George as master of the White Shoals ship.

A Port Colborne dispatch reports that the tug owners of the Welland Canal have reduced towing rates on boats of 500 tons and under to the following rates: Loaded, 15 cents per ton; light, 12 cents. These rates are for through towing.

Owners of Canadian steamers on inland waters which carry passengers and land at American ports, have been notified that by act of congress, approved March 1, 1895, the office of special inspector for foreign steam vessels has been abolished. Hereafter British steamers on the St. Lawrence River and lakes, carrying passengers from American ports, will have to be inspected at such American ports by the nearest board of local inspectors.

Dispatches from Duluth state that a deal has been closed whereby a number of New York capitalists have agreed to furnish the finances to the Minnesota Canal Co., for the purpose of opening up 200 miles of canal and river front contiguous to that enterprising town. The purposes of the canal are for furnishing a water supply for all purposes, for navigation and driving of logs and for power to be used in manufacturing. The deal insures the expenditure of $12,000,000, in and around Duluth.

THE World Specialty Co., of Detroit, Mich., manufacturers of the "International" high grade automatic injector, inform us that their new injector is meeting with such a rapid sale that they are considerably behind their orders. They state that in their opinion the great demand for this injector is due to the fact that it handles a much hotter water supply than any other automatic injector, and also that it meets the rapidly growing demand for an automatic boiler feeder to work under very high steam pressures.

LIGHT-HOUSE ILLUMINANTS.

MONTGOMERY, ALA., April 23, 1895.

To the Editor of The Marine Record:

I have read with care the article on Lights for Light-Houses in your issue of March 28, 1895.

The question of the best illuminant for light-houses has to be studied from many points of view. The best light intrinsically may not suit economical conditions; that is, it may be too costly for what it may be called upon to do. For example, it would be a mistake to put a costly electric light at a point where there is little or no trade, or which is frequented by a few small vessels. It would be equally a mistake to put a small light in a light-house which is an important landfall. Circumstances alter cases here as elsewhere.

Your article says that at a recent address before the London Shipmasters' Society, "It is held that gas is superior to the electric light." A bare statement of this sort means nothing unless some information as to conditions is given. The question of oil, gas and electricity was considered very fully by the International Maritime Congress, held at London in July, 1893, in the sessions of the section which was specially charged with light-house matters. The almost unanimous consensus of opinion was that the electric light was the one to be used for all important landfall lights. The dissenters were Mr. J. R. Wigham, the inventor of the Wigham gas-burner, and Mr. Lo Gatto, an Italian engineer, who was at the time a great believer in the use of gas, and who presented a paper on Mr. Wigham's then latest light. Mr. Lo Gatto admitted that he had never been to this light. He said at the end of the discussion on his paper "that after hearing the discussion, his opinions were somewhat changed, and he would study the question further."

A careful and very costly series of experiments on oil, gas and electricity as light-house illuminants was carried on at the South Foreland light station, England, during 1884-85. This series of experiments lasted rather more than a year. The result was to establish the electric light as the one best adapted for all important landfall lights.

To discuss electric lights, or other lights from the standpoint of equal initial intensity is useless. If a light of 500 candle power be desired, it is not likely that anyone would think of using electricity for the purpose, as an oil light would give this amount of light at a very small cost. Electricity finds its use when a light of great power is required; oil and gas lights have their uses for lights of less moment.

Mr. Wigham's statements as to the relative merits of gas and other lights, especially electric lights, must be considered from the point of view of the man who has invented an excellent thing, and who insists in season and out of season that nothing can compare with his invention. Mr. Wigham has written much on the subject, but his writings do not give, so far as the writer has been able to find, facts and figures. During the two years and a half that the writer was the engineer secretary of the light-house board, he had several of Mr. Wigham's articles brought to his attention and the impression left on his mind was that Mr. Wigham dealt too much in "glittering generalities" for his articles to be treated as strictly scientific documents.

Mr. Wigham's great devices for the service of light-houses are two: 1st, his gas burner; 2d, his multiform apparatus. The burner consists of a series of gas jets placed concentrically, and so arranged that light can be taken from 28, 48, 68, 88 or 108 of the jets as necessity may require. The flame from the full burner is 14 inches in diameter; it is of 2,400 candle power, or an average of 22.22 candle-power for each jet. The multiform apparatus is obtained by superposing on the same axis two, three or four of these burners, each accompanied with its lens. The apparatus is termed bi-form, tri-form or quadri-form, according as there are two, three or four lenses in the pile. As the burners are all of equal power, the total candle-power for each form is 4,800, 7,200 and 9,600 respectfully.

Mr. Wigham has been working on the idea, which prevailed until quite recently, that, in order to obtain a powerful light one must have a big light. This idea led to the construction of lamps with as many as ten concentric wicks in the English and Scotch services. Recent experiments and observations have changed this idea entirely. It is recognized now that the power of a light and its ability to penetrate fog depend solely upon its intrinsic brilliancy; that is, upon the number of light units in a surface unit. The present endeavor of all services is to increase the intrinsic brilliancy of lights. The most powerful artificial light we have is the electric arc light; this is by reason of its great intrinsic brilliancy. Mr. Wigham, in spite of his opposition to the electric light, admits virtually the necessity of having light of as great intrinsic brilliancy as can be had. His

"intensity burner" was devised with that end in view. It makes his light whiter, more brilliant intrinsically, and hence more powerful. His old burner gave a light of 2,400 candle power; he claims that his new one doubles this, thus giving a light of about 5,000 candle-power. If this amount of light which is now given out on a circle of 14 inches in diameter were condensed into a space of only one inch, the intrinsic brilliancy of the light would be very greatly increased.

When the writer first joined the light-house board, he found that the objection urged against the electric light was that it was lacking in red and yellow rays, and had too large a proportion of blue rays to penetrate fogs, the blue rays being too readily absorbed by fog. The conclusion reached by Mr. W. H. Dixon and by Prof. Grylls Adams, both well known observers in this line of work in England, is that "with a mixture of air and vapor, without the admixture of other substances, rays of different colors were observed and scattered very nearly in the same proportion. This showed that the proportion of the electric light which was scattered by such a fog was no greater than the proportion of any other source of light." This conclusion, the result of many experiments, is the same as that reached by the French light-house service. In all the papers read and in all the discussions held before the section of the International Maritime Congress of 1893, to which were referred all questions relating to light-house matters, the writer has failed to discover anything which proves that the red and yellow rays are especially serviceable in fogs. On the contrary, the utmost stress was placed by nearly all the speakers on the intrinsic brilliancy of the lights as being the essential feature.

But the presence of blue rays does not involve the absence of red rays. Light is one manifestation of molecular energy. As this energy becomes more and more violent, the light passes from the dark red up to intense white. But white light requires the presence of blue rays as well as of those of red and yellow. Because the electric light has a bluish hue, it must not be argued that there is no red or yellow. The red and yellow are there although in different proportions from those found in the solar spectrum.

The comparison of lights by their candle-power alone is misleading. The true basis of comparison is the intrinsic brilliancy, or the candle-power per unit of surface of the light. To increase the surface of a light without increasing its intrinsic brilliancy adds almost nothing to its penetrative power. Prof. Grylls Adams states that in one of his experiments, wherein the conditions of absorption were the same all the time, "the Wigham 108-jet gas flame was seen to a distance of 80 feet, while a single gas jet was seen to a distance of 70 feet." The 108-jet flame was 2,400 candle-power, while the single jet was of only 22 22 candle-power. Professor Adams gives this account of another experiment which he tried: "In the experiments at the South Foreland he had measured the intensities of light at a distance of about a mile and a half from the light-house, using one of those beautiful lenses which they knew at the South Foreland as the "Mew Island lens, of M. Barbier's manufacture. At a distance of a mile and a half the illumination from a surface of light of about 2,500 candles, consisting of 108 separate gas burners placed behind the lens was compared with other small lights, such as 100 candle-power electric glow (incandescent) lamp and a 50 candle-power glow lamp. The 108-jet burner occupied a circle of 14 inches diameter, whereas the 100-candle single glow lamp was placed accurately in the focus of the large lens. The effect of the concentration of the source close to the focus was that at the distance of a mile and a half the intensity of the 100-candle lamp as measured was more than half that of the 2,500 candles; the 50-candle glow lamp placed accurately in the focus, gave an intensity of about one-third of the 2,500 candles placed within a circle of about 14 inches in diameter."

In other words, a concentrated light of one-twenty-fifth the candle-power gave through the same lens a beam of one-half the intensity of that of the more scattered source of greater candle-power; while the concentrated light of only one-fiftieth of the candle-power gave through the same lens a beam of about one-third the intensity of that of the same gas-burner.

This experiment of Prof. Grylls Adams, taken in connection with the result of his and Mr. Dixon's observations on the absorption and diffusion by vapor of rays of light of different colors, disproves entirely the statement that "an oil light, which is rich in these rays (red and yellow) can be seen farther in foggy weather than an electric light of equal candle-power," as stated in your article. Assuming, however, for the sake of the argument, that the blue rays are more readily absorbed by fog than are the red and yellow rays, it follows that, after a certain distance of penetration into the fog, the blue rays will be absorbed, and only the red and yellow rays will be left. But these rays of the electric light starting with a greater initial intrinsic brilliancy will penetrate, by reason of this, further into the fog than will either the oil or the gas light.

The idea that the electric light cannot penetrate fog as far as oil or gas seems to have arisen generally from a misapprehension as to the law of penetration of light of any sort into fog. When the electric light with its great candle-power was introduced, a penetration into fog was expected which should be in some degree proportionate to its greater candle-power. The penetration does increase, but the rate of increase is far from being as rapid as the rate of increase of candle-power.

The law expressing the relation between the candle-power of the light, the transparency of the atmosphere, and the distance up to which a light is visible shows very quickly how disproportionate is penetration into fog to increase of candle-power. Let us indicate complete capacity by 0, and complete transparency by 1; the intermediate degrees of transparency being expressed by 0.1, 0.2, etc., or even smaller fractions if need be. Taking now an atmosphere of which the transparency is indicated by 0.1, the law above mentioned gives the penetration of a light of 64,000 c. p. into this atmosphere as 2.28 miles. This light is that of the flash of the average first order light of the L. H. service of the United States. The penetration into the same atmosphere of a light of 24,000,000 c. p. would be only 3.62 miles. This power of light is that of a flash of the La Heve light at Havre, France. The penetration into the same atmosphere of a light of 236,000,000 c. p., the calculated power of the new Fire Island light would be but 4.17 miles. In other words, while the second light is 375 times as strong as the first, the additional penetration is only 59 per cent.: and while the third light is 3687.5 times as strong as the first the additional penetration is but 83 per cent.

The disproportion between increased power and increased penetration is still more marked as the degrees of transparency become lower, until at last, when the transparency becomes 0, one light is just as good as another; for if the atmosphere should become absolutely opaque no light, how great soever its candle-power or its intrinsic brilliancy, could be seen.

Lack of consideration of this law has caused, without doubt, much of the erroneous idea of the value of the electric light as a light-house illuminant. The phenomenon of the lack of penetration of the electric light has been explained by untenable hypotheses rather than by physical law. It seems strange that if Mr. Wigham believes that the explanation of the phenomenon is due to the lack of red and yellow rays, or, more correctly, to the presence of an excess of blue rays, in the electric light, he should have made no mention of it in all the discussions at the International Maritime Congress. Could it be that he realizes that this idea is exploded too thoroughly to allow of its use before a congress of scientific men?

The chairman of Section IV of the Maritime Congress of 1393 closes the discussion on Mr. Lo Gatto's paper on the "Comparison of Gas and Electric Light in Light-houses with Optical Apparatus of Large Dimensions" with these words: "Those experiments (the ones carried on for more than a year at the South Foreland, England, to determine the relative merits of gas, oil and electricity, as illuminants for light-houses) had demonstrated the result, which had never been successfully impugned, that for great and important stations, stations where there was a great land fall, the electric light was the best. That conclusion had been arrived at, not from any experiment only, but was the result of a most valuable series of experiments extending over a year, or, indeed, longer. It was confirmed by the experiences of the French light-house authorities, who also recognized that for exceptionally important light-houses the electric light was the best."

The electric light is costly both in first establishment and in subsequent maintenance, hence its use is recommended only for the most important stations. Its great advantages over any other light for these stations is admitted now by all tarological authorities with the exception of Mr. Wigham, who favors naturally his own child, the gigantic burner with its gigantic lens.

One great disadvantage in connection with Mr. Wigham's burner is the enormous size of the lens required to prevent undue dispersion of the rays from so large a source of light. The focal length of Mr. Wigham's "giant lens" is 6.56 feet. The size of this apparatus adds greatly to its cost. Another disadvantage is the liability of the great heat of the flame to crack the lens or the prisms. This accident has happened already, as the writer is informed by one of the French makers of light-house apparatus.

The lack of fixity or steadiness of the electric light is merely mechanical. It will disappear, no doubt, as the construction of the machinery and carbons is improved. It may be questioned whether the lack of steadiness of the electric light is greater than that of an oil light of the first order. This class of oil light is very susceptible to draughts and winds. Unless the night be unusuallly calm a keeper must be constantly in the lantern to regulate dampers and ventilators so that the light shall not be blown out. If there be too much wind the flame of the lamp will jump up and down in a way which it is almost impossible to control.

As the writer is no longer connected with the light-house board he is unable to say anything as to the policy of the board in the application of electricity to the light-houses of the United States. It is unlikely that, for reasons easily deducible from what precedes, this light will be introduced at more than a dozen or fifteen very important landfall stations.

Lighted buoys have been introduced largely into the French service. It is impracticable to carry a light of great power on a light-ship. It has been explained above that great increase of light-power gains but little increase of fog-penetration; hence, the French have concluded that it is better to have, under certain conditions, a number of lighted buoys, rather than one light-ship. The buoys save much over a light-ship in first cost and in subsequent maintenance. About two years ago the French proposed to replace two light-ships, marking the course through the main channel leading to Dunkirk, by a number of buoys. After a thorough examination of the question the change was decided on, but the light-ships were to remain until pilots and mariners should have become accustomed to the new lights. It is possible now for vessels to follow this channel in weather which formerly would have caused both light-ships to be invisible for some time to a vessel running from one to the other.

Lighted buoys have been used to a limited extent in the United States. It has been found that they are expensive to maintain, owing mainly to the carelessness or criminal negligence of shipmasters and pilots, who, for the sake of saving a few feet, or perhaps even inches in a trip, run them down without thought or regard of the vessels coming after them. Several which have been extinguished during the period of the writer's service with the light-house board, bore distinct marks of having been struck by a steamer's propeller wheel. This carelessness is of the nature of the vandalism which causes the masters of vessels anchoring near the cables leading to the electric buoys in Gedney's channel, to cut these cables when the anchor fouls them, rather than spend a few minutes in clearing them from the anchor.

F. A. MAHAN, Major of Engineers, U. S. A.
Late Engineer Sec'y U. S. Light-House Board.

BOOKS AND PERIODICALS RECEIVED.

"Around the Lakes" is the title of a handsome volume published by the Detroit Dry Dock Co., ship and engine builders, Detroit, Mich. This work, while in the nature of trade literature as it contains handsome engravings of the plant and of vessels built by the Detroit Dry Dock Co., with a resume of the history of the firm, is also of a general interest and importance to the marine community, as it gives a full list of American lake vessels, the addresses of managing owners and condensed statistics of lake commerce. The vessels built by the Detroit Dry Dock Co. during the past 25 years make a total of 113 craft, not including the vessels now on the stocks, which are numbered by the builders 119 and 120. In addition to the building of many of the finest vessels, passenger and freight, afloat on the lakes at this time, 197 steamers have been equipped with engines and boilers during the same period, and the dimensions of all machinery being given, the data will be found of great interest to intending builders as a means of comparing, on a fair basis, the performance of different vessels. In issuing so handsome and complete a work, the Detroit Dry Dock Co. have conferred a favor on the lake marine at large and all interested therein.

* * *

Patterson's Naval Reserve Man's Guide illustrated, is the title of a 68 page book found on our exchange table this week. This book is designed as a naval dictionary and reference for officers and men of the navy, revenue cutter service and naval reserve, by Capt. Howard Patterson, principal of the New York Nautical College, formerly professor of naval science at Browne's College and Commandant of the Haitien Navy. The author has published several valuable works on navigation and seamanship and this naval guide is a small edition of his illustrated nautical dictionary, though adapted more specially to the explanation of modern naval subjects, as differing from mercantile uses. The guide contains definitions of naval terms and phrases, various line and staff rank and grades and the duties designated to each, naval academy details, uniforms, salutes, as well as engravings relating to modern ordnance explosives, projectiles, armor, torpedo launches and boats, dynamite cruisers, battle ships, monitors, etc, etc; finely illustrated. The whole is a work of much merit. Published by the New York Nautical College, 130 Water Street, New York. Price $1.

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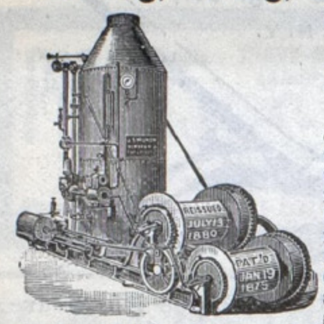

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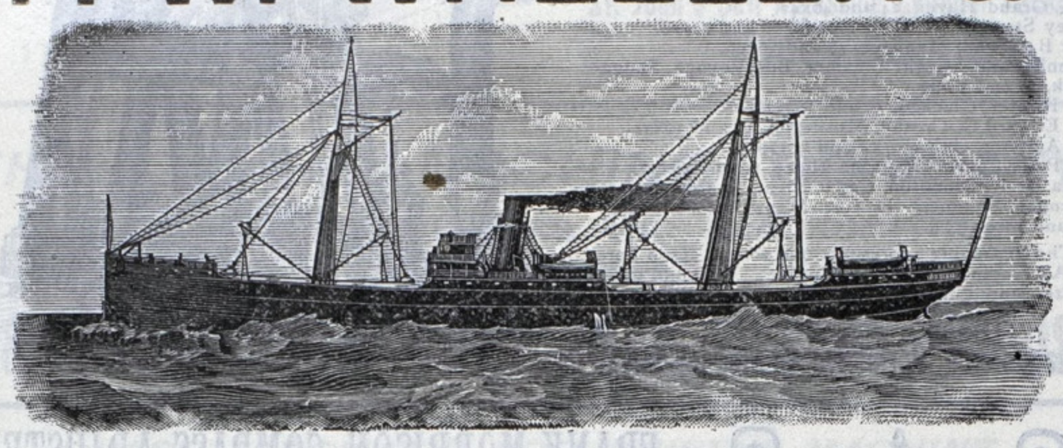

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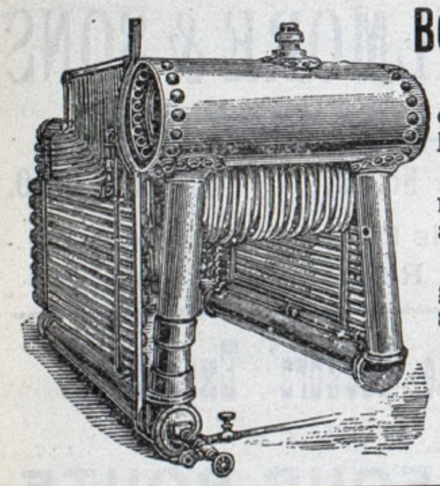

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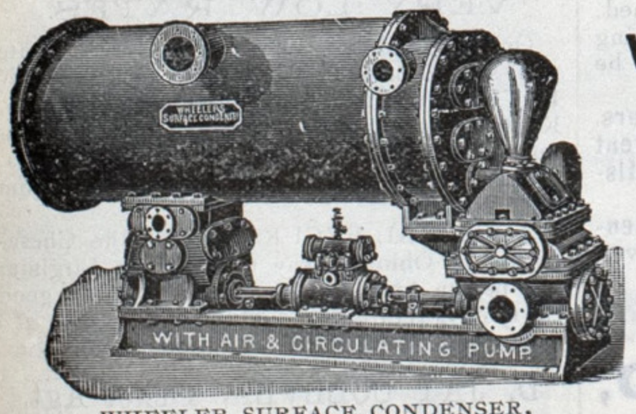

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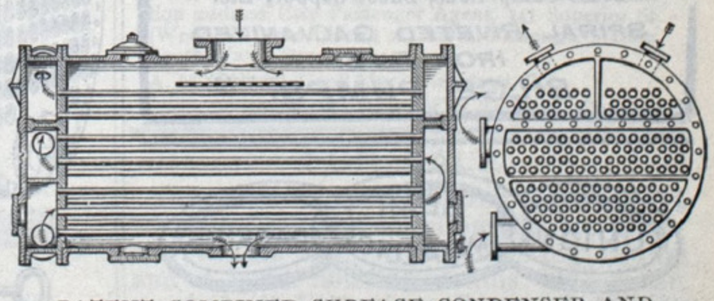

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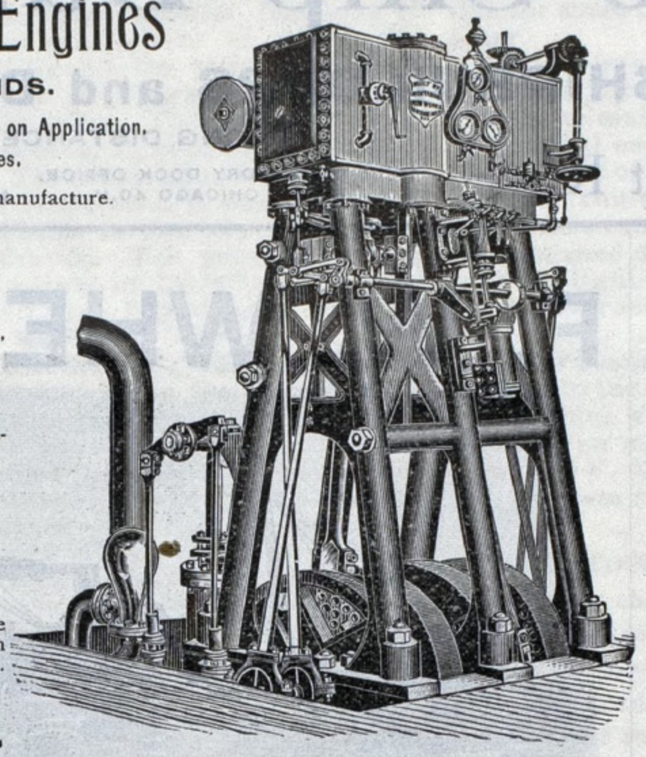

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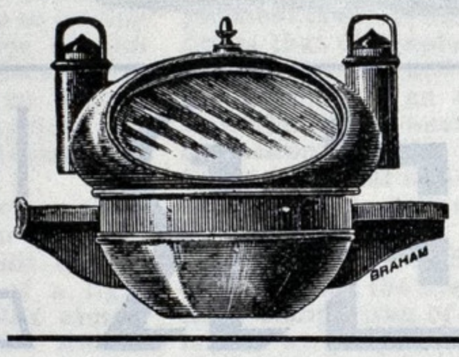

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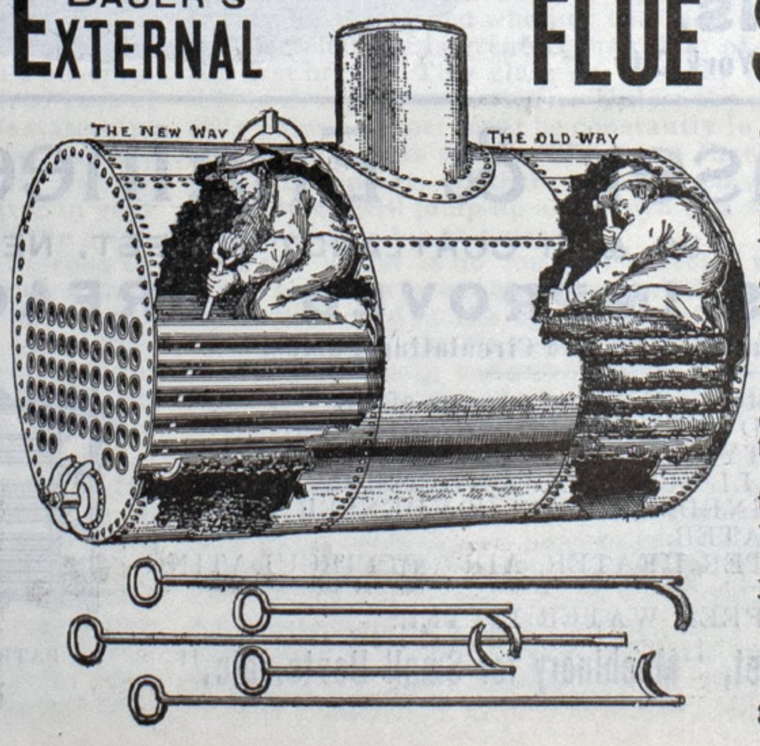

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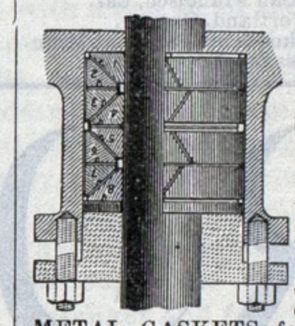

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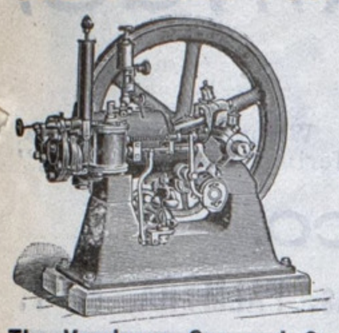

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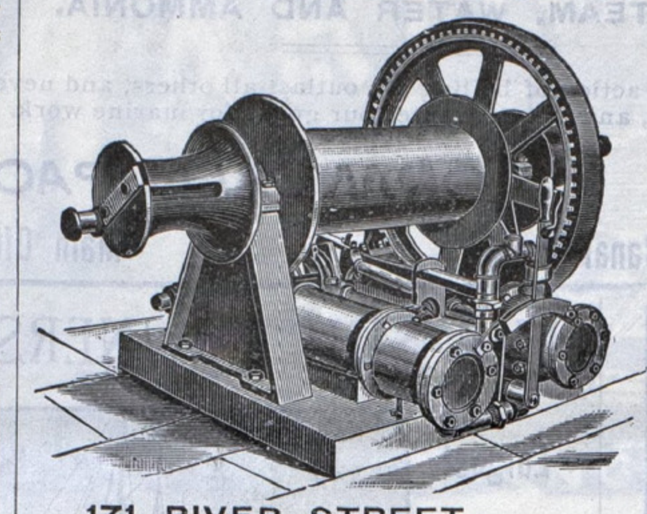

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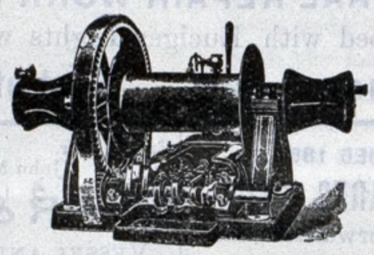

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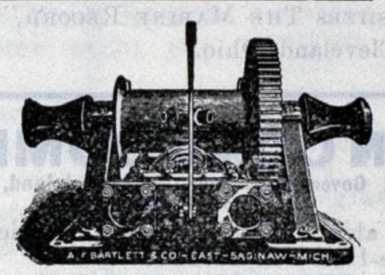

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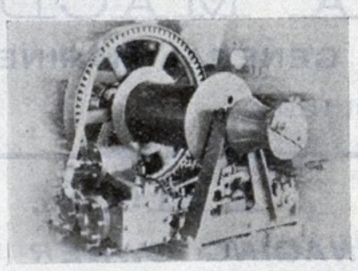

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TREASURY DEPARTMENT, U. S. LIFE-SAVING SERVICE, Washington, D. C., April 18, 1895. Sealed proposals will be received at this office until 2 o'clock p. m., of Tuesday, May 7th, 1895, for the construction of twelve 26-foot Monomoy surfboats, six to be delivered in Buffalo, N. Y., and six in New York City. Proposals for either or both lots of boats will be considered. Plans and specifications, together with full information and blank forms of proposal, can be obtained upon application to this office, to the Inspector of Life-Saving Stations, 24 State Street, New York City, or the Superintendent 9th Life-Saving District, Buffalo, New York. S. I. KIMBALL, General Superintendent. 17-18

OFFICE OF THE LIGHT-HOUSE INSPECTOR, NINTH DISTRICT, Chicago, Ill., April 3, 1895. Proposals will be received at this office until 12 o'clock M., on Tuesday the 30th day of April, 1895, for Anthracite and Bituminous Coal and Wood for Vessels and Stations in this District, for the fiscal year ending June 30, 1896; to be delivered to the following named vessels and stations: Old Mackinac Point, Simmons Reef light-vessel, White Shoal light-vessel, Grays Reef light-vessel, Waugoshance, Skilligallee, Beaver Island, South Fox Island, North Manitou, South Manitou, Point Betsey, Manistee, Ludington, Grand Haven and Eleven Foot Shoal light-vessel, Mich.; Chicago and Grosse Point, Ill.; Wind Point, Milwaukee, Sheboygan, Manitowoc, Twin River, Kewaunee, Sturgeon Bay Canal and Porte des Morts, Wis.; and Plum Island, Poverty Island, Seul Choix Pointe and Squaw Island, Mich. Forms of proposal and printed specifications giving full particulars as to the kinds of fuel required, the quantity and quality, and the terms of delivery and payment, can be obtained at this office. The right is reserved to reject any and all bids, and to waive any defects. J. H. DAYTON, Commander, U. S. N., Light-House Inspector.

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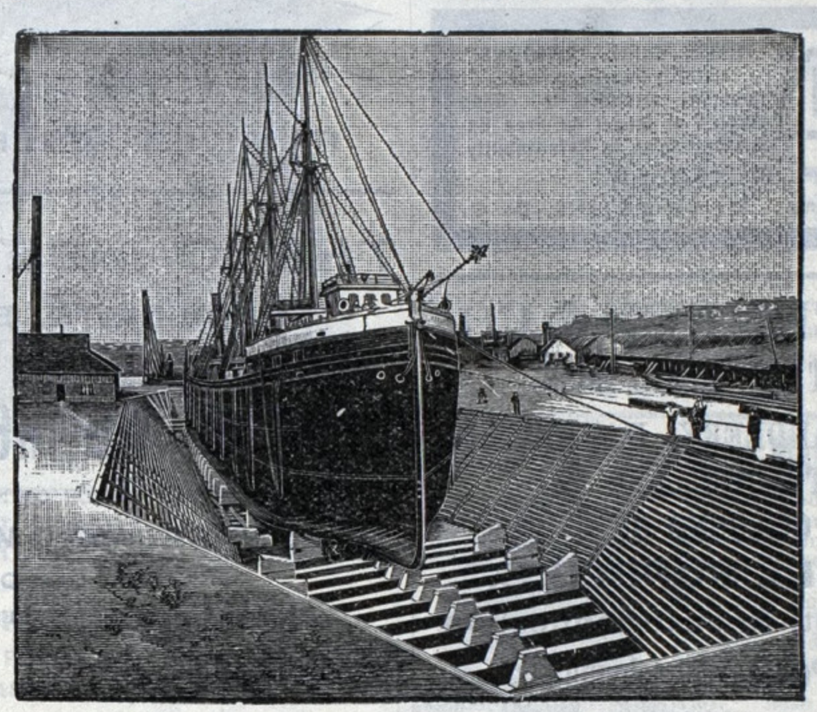

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